

Notice of Allowability

Application No.

10/605,770

Examiner

Debra Wolfe

Applicant(s)

HOLMGREN ET AL.

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to October 24, 2003.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ The drawings filed on October 24, 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700



NOTICE OF ALLOWANCE

Allowable Subject Matter

1. It is the opinion of the examiner that the art of record (considered as a whole) neither anticipates nor renders obvious "a robot manipulated roll form hem tool, the robot having an arm with a receptacle on one end, the hem tool comprising.... a second roller disposed on the tool support member with an axis of rotation at a second angular orientation relative to the tool support member that is different than the first angular orientation; and a force transducer operatively engaging the tool support member to limit the force applied by the robot arm to the rollers through the tool support member" in combination with the rest of the claimed limitations set forth in the independent claim.

Further searching by the examiner yielded additional prior art as follows:

2. Dorsett (U.S. Patent # 5,038,597) discloses a bending apparatus for bending a marginal flange on a workpiece having a drive arrangement (17) that is adaptable to a robot arm; an end effector adapter (end piece 20); a linkage having a bracket comprising of a lever link (23), a link (27), and a stand (1), a tool support member comprising of a tool holder (14) and a main part (13) and two links (9, 10) that connect the bracket and tool support together; and a bending tool (6) (See FIG 1).

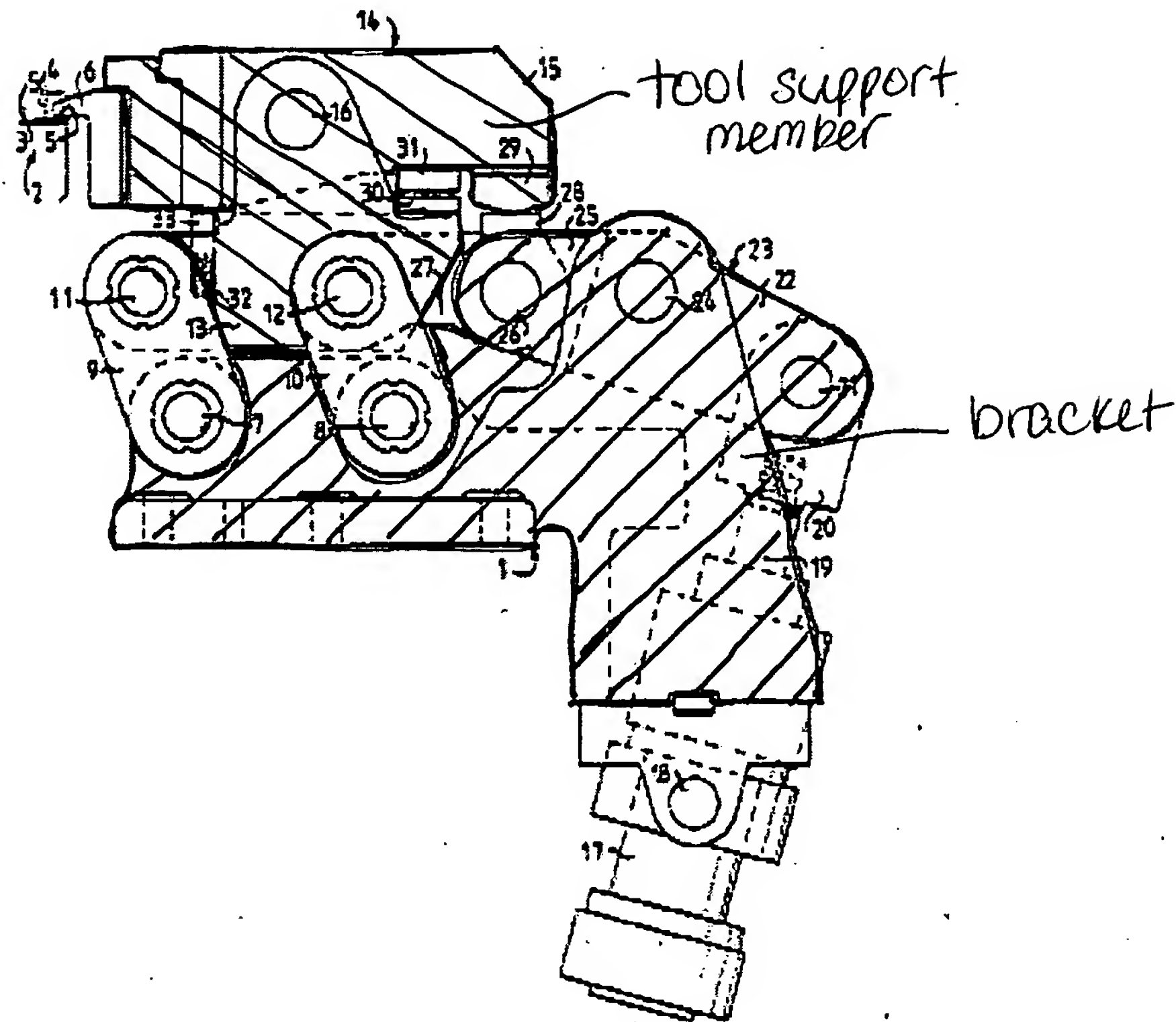


FIG. 1
(U.S. Patent # 5,038,597 to Dorsett)

Shiragami (Japanese Patent # 02000246351A) discloses a hemming processing method and a robot manipulated device having two rollers (2) that have two different angular orientations relative to the tool support. Lastly, Sawa (U.S. Patent # 5,228,190) discloses a roller type hemming apparatus having a robot hand (2) and a single hem roller (4) and a force transducer comprising of a spring (10) used to urge the slide block (13) downwardly of the support block (11) (See FIG 2).

3. However the above cited prior art fails to disclose a "robot manipulated hem tool having an end effector, a linkage comprising of a bracket, a tool support, and two links connecting the bracket and tool support member together, a first and second roller each disposed on the tool



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support member and having a different angular orientation relative to the tool support member and a force transducer that is operatively engaged with the tool support member". Therefore, it is concluded by the examiner that claims 1-12 of the present invention are allowable subject matter.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Wolfe whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Friday 6am-3:30pm with alternating Fridays 6am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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